

REMARKS**CLAIM REJECTIONS:**

Claims 19-21 and 23-28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over WO 97/04871 (Buchanan) in view of Apelian et al. (U.S. Pat. No. 5,242,676).

WO 97/04871-Buchanan

The Examiner is correct that WO 97/04871 (Buchanan) teaches a process for treating a zeolite to improve its butene selectivity. Buchanan also discloses that the starting zeolites have a silica to alumina molar ratio of less than about 200:1.

In contrast, Applicants use their resultant catalyst to increase propylene yield from olefins -- rather than for improving the butene selectivity as taught in Buchanan.

Additionally, Applicants' starting zeolites have twice the amount of aluminum in the zeolite expressed as the silicon/aluminum atomic ratio versus Buchanan which is expressed as the silica alumina molar ratio $\text{SiO}_2/\text{Al}_2\text{O}_3$.

US 5,242,676 Apelian et al.

The Examiner is correct that Apelian et al. disclose a process for producing a dealuminated zeolite. The Examiner also states that the dealumination treatment can be performed before or after the formulation with the binder; however, the dealumination treatment described in Apelian is not the same as Applicants' because Apelian et al. do not steam the catalyst.

The treatment in Apelian (which consists in only contacting the catalyst with a dicarboxylic acid) dealuminates the external surface of the zeolite crystals. Applicants *combine* steaming with extraction (by following the steaming step with an extraction step) to homogeneously dealuminate the zeolite (meaning that both the external surface and the internal surfaces are dealuminated).

Also in Apelian, a zeolite catalyst is bound with an inorganic oxide binder prior to the selective surface dealumination. However where less than 20% binder is used, Applicants' binding step is performed after steaming and after extraction because the presence of alumina in the binder yields excess alumina if the binding step is performed prior to the aluminum

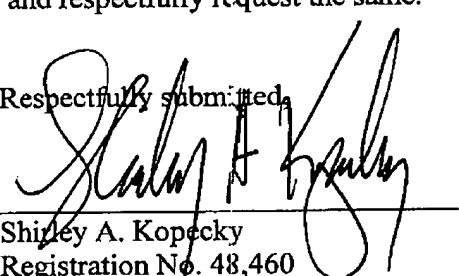
extraction step. In contrast, if greater than 20% binder is used, then binding is performed before steaming and extraction.

CONCLUSION

There is no suggestion in the prior art for the proposed combination of the cited references that would make Applicants' invention obvious. Further, the basis for any such combination under 35 U.S.C. § 103(a) must be found in the prior art references themselves and not in Applicants' disclosure; it is not. Finally, even if all of the teachings of these references are combined, they still do not teach or make Applicants' invention obvious.

Having addressed all issues set out in the Office Action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request the same.

Respectfully submitted,



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